REMARKS

This application has been reviewed in light of the Office Action dated June 8, 2004. Claims 1-26 are presented for examination. Claims 1, 12, 18, and 23 have been amended to define more clearly what Applicant regards as the invention. Claims 1, 6, 12, 17, and 23 are in independent form. Favorable reconsideration is requested.

The specification has been amended in response to the Examiner's objection thereto. Specifically, the parameter *sh* has been inserted into a sentence defining that parameter. No new matter has been added.

Claims 1-4, 12-15, 17-20, and 22-26 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,366,281 ("Lipton"). Claims 5, 16, and 21 were rejected under 35 U.S.C. § 103(a) as being obvious from Lipton, and Claims 6-11 were rejected as obvious from Lipton in view of the Background section of Applicant's specification.

Claim 12 recites, *inter alia*, a depth map extracting step of extracting a depth map, which represents a depthwise distribution of an object, from a stereo image containing object images looking from multiple viewpoints and formed in the same image plane. Among other advantages, creating a depth map allows a great deal of flexibility in generating multi-viewpoint images. For example, a series of viewpoint positions may be selected that are centered symmetrically about the left image:

> [T]he viewpoint positions are determined such that the viewpoints are arranged at equal intervals and in symmetrical relation about the viewpoint position of the left image....[B]y arranging the viewpoint positions in symmetrical relation about the viewpoint position of the left image, a deformation

> of the image can be minimized and a high-quality three-dimensional image can be stably obtained even if an error occurs in the depth map depending on the object and shooting conditions.

(Specification at page 23, line 16, through page 24, line 2).

The specification, as the Examiner points out, states that the depth map "represents a horizontal position shift of the position of the corresponding point in the right image with respect to each pixel in the left image." (Specification at page 18, lns. 7-10). However the specification goes on to state:

> In addition, the depth is also determined by interpolation for the not corresponding points and the other points for which the search of the corresponding point has not been made at all.

(Specification at page 18, lines 13-16). Thus, while certain points in the depth map may be computed based on a difference in horizontal position, the resulting map actually provides depth information. Or, to put it more explicitly:

> The thus-determined depths are provided as a depth map. Fig. 6 shows a depth map determined from the pair of stereo images shown in Fig. 5.
>
> A dark area in Fig. 6 represents a region at a shorter distance from the camera 2, and as the map becomes lighter, the distance from the camera 2 increases.

(Specification at page 20, line 19, through page 21, line 1).

By contrast, Lipton relies on generating morphed images between a left and right stereoscopic images. The morphing process is simply "the generation of a sequence of images to provide a continuous change from one image to the other." (Lipton at col. 6, lns. 62-63). This process, by definition, creates a sequence of views between the left and

right images, and therefore does not provide flexibility in controlling the viewpoint of the generated images, e.g., does not provide viewpoints arranged in symmetrical relation about the viewpoint position of the left image, as discussed above. Thus, Lipton does not teach or suggest extracting a depth map that represents a depthwise distribution of an object, as recited in Claim 12.

In addition to these distinctions, Claim 12 has been amended to recite an outputting step of outputting the three-dimensional image to a printer apparatus through an interface circuit. While Lipton mentions "image sizing and printing" (see Fig. 3), that reference is not believed to teach or suggest the claimed outputting step, particularly when the claimed invention is considered as a whole, as the law requires.[1/] Claims 1, 18, and 23 have been similarly amended.

Accordingly, Claim 12 is believed to be patentable over Lipton.

Independent Claims 1, 6, 17, and 23 recite features similar to those discussed above with respect to Claim 12 and therefore are also believed to be patentable over Lipton for the reasons discussed above.

A review of the other art of record, including the Background section of the Applicant's specification, has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

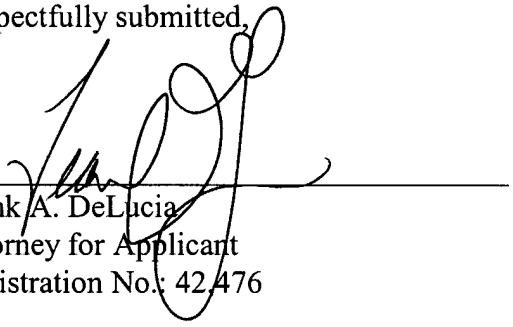
1/MPEP § 2141 (citing *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986)).

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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